the conjunctiva, eyelids, and the orbit. These tumors are not malignant, the pigment that they contain adds nothing to their malignancy, and the prognosis is by no means as serious as in the tumors of the first group."—*Arch. Clin. de Bordeaux*, Vol. II, No. 9, September, 1893, p. 413.

SMITH ELY JELLIFFE (Brooklyn).

THORAX AND ABDOMEN.

I. Case of Extensive Traumatism of Thorax Conducted to Recovery. By I. P. STRITTMATTER, M.D. (Philadelphia). The reporter related, at a meeting of the Philadelphia County Medical Society, the following case: A man, aged twenty-two years, was admitted to St. Mary's Hospital, September 10, 1890. About two hours previous he had sustained a penetrating wound of the left side of his thorax by a wagon tongue.

When first seen he was lying on his back. Respiration labored but painless, except when making an effort to change position or talk. Respirations 28, pulse 80; lips somewhat cyanotic; face anxious; no perspiration. His breathing was peculiar. On the right side of the thorax, respiratory movements were exaggerated in inspiration and expiration, and all the accessory muscles of respiration were brought into requisition. Abdominal respiration was apparently suspended, while the abdominal muscles were fixed and rigid. On the left side, over a space extending from clavicle to a little below the nipple line, and from sternum to axillary line, the movements were diametrically opposite to those on the right side. With each *inspiration* the centre of this area sank about three inches below, and with each *expiration* arose a similar distance above, the normal arc in chest circumference. Only two or three words at most could be uttered before necessity for breath caused a pause. At each inspiration the movements of the heart were perceptible in the lower inner angle of this space.

The heart and thoracic cavity being only protected by contused skin without bone or muscle support, an incision one inch long in the centre of the space permitted an exploration with one finger. The pectoralis major was pulpified. The third, fourth, and fifth ribs were fractured; the third at the sternum (green-stick), at a point two and a half inches external to this point, complete, with separation of ends, and again at a point four inches external to latter fracture, complete, but the fragment held up by intercostal muscles and parietal pleura. The fourth rib was separated at its junction with its costal cartilage, and fractured at a point five inches external. The fifth had a green-stick fracture of cartilage near sternum, a complete fracture four inches external, and complete fracture at a point corresponding with fracture of rib above. All these fragments were in the pleural cavity; some quite freely movable, others somewhat fixed. The lung could not be felt. The incision having been enlarged so as to permit a complete inspection of thoracic cavity, it was found to contain several fragments of ribs, about a quart of clots and fluid blood. The lung was collapsed, occupying a space as large as the fist, no wound being found in it. No bleeding-point inside the pleural cavity, and very little from intercostal vessels. Some bleeding from shreds of pectoralis major required one ligature. About two minutes after enlarging the incision and introducing the hand, the patient became more cyanosed, respirations falling to 4 per minute, pulse dropping to 16. The placing of a large sponge in the thoracic cavity, and closing the flaps of skin so as to shut off the entrance and escape of air, was followed by immediate improvement. At the expiration of two minutes, respirations were 12, pulse 56. A silver wire was passed under the fourth and fifth ribs respectively, while two were passed under the third, keeping as close to the ribs as possible, and the fragments drawn up in position. The chest cavity was washed out with a boric acid solution (ʒj to a pint of hot water). The sponge was removed, and the intercostal tissues and shreds of pectoralis major stitched with sterilized catgut.

The ends of silver wire were brought through the skin at a point directly above the emergence from under the ribs; finally, the skin wound was closed with silk; the ends of silver wire were fastened by twisting over three pairs of long, gauze-wrapped hæmostats that effectually bridged over the space occupied by third, fourth, and fifth ribs, resting on the second above and the sixth below. The whole anterior and left lateral thorax was covered with gauze, and a thick layer of cotton secured by straps of rubber plaster and bandage. The patient reacted well from chloroform anæsthesia, and was conscious before his dressing was completed, apparently none the worse from heart-failing and bosom-cleaving experience. Respirations 22, pulse 94. Thoracic and abdominal respiration, but mainly the latter. Could take a deep inspiration without pain or inconvenience, and could utter quite a long sentence without stopping for breath, in marked contrast with the half-audible voice and interruption for breath after every other word prior to adjusting his thorax. During the night the dressings became saturated with blood, that upon investigation came from one of the small arteries in the pectoralis major. It was readily controlled by ligature. Temperature on following day was 99° F., pulse 100; P.M., temperature 100° F., pulse 100. Patient comfortable. September 12 (second day), A.M., temperature 100° F., pulse 110; P.M., temperature $101\frac{1}{5}$° F., pulse 110. September 13 (third day), some oozing of serum from wound, saturating the dressing; air entered and escaped through the middle of wound; temperature 100° F., pulse 110. September 14 (fourth day), A.M., pulse 100, temperature $100\frac{2}{5}$° F.; P.M., temperature 101° F., pulse 108.

Some pus on the dressing was evidently from a little sloughing of the pectoralis major. About one-half pint of bloody serum was emptied from left pleural cavity by turning him on his left side; cavity washed out with boric acid solution. Opening in chest was tamponned with iodoform gauze; chest dressed as usual. His condition and treatment were about the same until September 20, or tenth day after injury, when the silver wires being loose were removed, the fragments of ribs having sunken but little below the chest-level, and apparently not dependent upon external means for holding their position. At the end of four weeks he was permitted to get up and walk about the ward. On the twenty-eighth week after the injury he resumed his work as a teamster. The first breath-sounds were heard on the left side in about eighteen months. He now breathes fairly well down to the fifth intercostal space. His chest measurements are almost equal on the two sides, there being a difference of about two inches in favor of the uninjured side in the axillary and nipple lines, while the difference of expansion during forced and passive respiration is but 0.75 of an inch.—*Transactions Philadelphia County Medical Society*, 1893.

II. Suture Material and Methods of Suture in Abdominal Wounds. By Professor HOWITZ (Copenhagen). Howitz, in a paper before the recent Congress of Scandinavian Surgeons, presented the conclusions at which he has arrived from experience. He no longer employs the median incision, but incises through the rectus muscle of the side on which he intends to operate. Thus he has obtained more extensive wound-surface and better cicatricial formation than in the fibrous linea alba. He prefers silkworm-gut to all other material. All hæmorrhage should be stopped before the sutures are applied, and the patient must remain for three weeks in bed after the wound has healed. With these precautions he would prevent abdominal hernia after laparotomy. Professor Ask, of Helsingsfors, said, in the discussion, that out of 200 laparotomies he had seen but one single case of ventral hernia after laparotomy. He thinks that this is due to his using the proper suture material, silkworm-gut. It is strong, clean, and smooth, while it causes no irritation of the canal of puncture. He, as a rule, employs the median incision, and has seen no disadvantages follow. Professor Salin, of Stockholm, has used silk for suturing. He has not been so fortunate with regard to eventration as the preceding speaker, and has been obliged sometimes to do a second laparotomy. He applies a special suture to the peritoneum, buried serial sutures to the fascia, sutures to the skin, and several sutures to the whole abdomen to relieve tension.—*Hygeia*, No. 8, 1893.

III. Operations on the Biliary Passages and Formation of Adhesions in the Upper Part of the Abdomen. By

Professor Lennander (Stockholm). Lennander reported his operations on these passages before the recent Congress of Scandinavian Surgeons. He has operated fourteen times for various affections of these passages, of which thirteen were cholecystenterostomies and one a cholecystotomy. He is an advocate of relatively early operation. If the patient has pain and the gall-bladder is palpable, he should be sent to a surgeon, but if it cannot be felt, it is better to wait. In every case of icterus, one should examine the fæces for gall-stones. If they are found, no operation is necessary, but if they are absent and the attacks continue, operation should be done as early as possible in order to prevent the appearance of cholæmia. As to the various methods, he prefers Winiwarter's cholecystenterostomy. To the technique he has nothing to add. He recorded a series of cases of extensive adhesions of the upper abdomen, which caused intense pain and disturbances of digestion, and which were removed by operation. —*Hygeia*, No. 8, 1893. Frank H. Pritchard (Norwalk, Ohio).

IV. The Surgical Palliative Treatment of Cancer of the Pylorus: Gastro-Enterostomy. By Dr. J. J. Matignon. The author describes the various surgical methods that have been in vogue, discussing the question of the incisions advocated by Billroth and Wolfler, Jaboulay, Rydigier, Pozzi, and others; the site, length, and character of the incisions beneath the skin are fully discussed; the sutures and the plates of Senn receiving due attention.

The statistics of the operation are, in the author's mind, encouraging. "At the beginning, according to Billroth, the mortality was 50 per cent.; a few years later Lücke, of Strassburg, reduced this to 31 per cent. In England and in America, where the gastroenterostomy is done by means of decalcified bone plates, the mortality is not greater than 11 per cent." The article is closed by a table of 188 cases, culled from the literature of the world, and is a *résumé* worthy of the attention of surgeons, the facts collated referring to the distant as well as the immediate results.—*Bull. gén. de Thérapeut.*, Vol. cxxv, August 15, 1893, p. 97.

Smith Ely Jelliffe (Brooklyn).

V. Successful Enterectomy for Traumatic Rupture of Ileum. By F. H. Wiggin, M.D. (New York). A boy, fifteen years of age, was kicked in the right lumbar region by a horse. Thirty-six hours later he had a temperature of 102.7°, pulse of 116, and respiration 33. Abdomen was tympanitic and tender, with muscular rigidity of its walls. He had vomited blood about twelve hours after the injury. A four-inch median abdominal incision below the umbilicus was made. The small intestine was drawn out and carefully examined, passing from the ileo-cæcal junction upward; near the jejunum a bruised and livid knuckle was discovered. Though no perforation was discovered in it prior to removal, afterwards a small perforation near its mesenteric border was found. About six inches of the intestine, including the injured portion, was excised, safety-pins being used for clamps. The vessels in the cut mesentery were ligated separately, and the edges of the mesentery united by a continuous suture of catgut. The healthy ends of the ileum were brought together, invaginated, and united by Maunsell's method.

While the ileum was being excised the patient came out from the influence of the ether, strained and tried to vomit, and a quantity of blood and fæcal matter escaped into the peritoneal cavity. This accident was due to the large size of the safety-pins. A liberal quantity of a fifteen-volume solution of hydrogen dioxide was poured into the cavity, and allowed to remain while the ends were completely joined, when more hydrogen dioxide was poured over them. Some time was allowed to lapse before the resulting foam was washed off, and the cavity flushed with normal sterilized salt solution (0.6 per cent.). Then the intestines were returned to the cavity, which was freely irrigated and left full of hot sterilized salt solution. The wound was closed, no drainage being employed. The operation from the time of beginning the anæsthesia occupied an hour and a half. At the end of twelve hours, the pulse had risen to 136; temperature was 102°. At the end of twenty-four hours pulse had fallen to 118, temperature to 100°; and gas escaped from the rectum. Progressive improvement continued thereafter. After about sixty-one hours the bowels moved without aid ; and during the ensuing twenty-four hours five large movements occurred. Up to this time he had been receiving one-eighth of a grain of morphine every three hours. This was now stopped. His subsequent convalescence was uninterrupted. He has since remained in good health.—*New York Medical Journal*, January 20, 1894.

VI. Cholecystenterostomy by the Use of Murphy's Button. By Dr. J. B. Murphy (Chicago). The technique of this procedure is as follows: An incision is made from the edge of the rib, two inches to the right of and parallel to the median line, extending downward three inches. The gall-bladder is drawn into the wound, also the duodenum. The duodenum is cleared of its contents by gentle pressure with the fingers, and kept empty by suitable compression at either side. A needle with fifteen inches of silk thread is inserted in the duodenum directly opposite its mesentery, and at a point near the head of the pancreas. A stitch is taken through the entire wall of the bowel, one-third the length of the incision in it to be made. The needle is again inserted one-third the length of the incision from its outlet in a line with the first, and brought out again embracing the same amount of tissue as the first. Thus, a loop of the thread three inches long being held, a couple of stitches are again taken in the reverse direction, and parallel to the first row, and one-eighth of an inch from it. Thus is formed a running loop which, when tightened around the button after it has been introduced, draws the incised edge of the bowel within the grasp of the cup. In the gall-bladder a similar running thread is put. An incision is now made in the intestine, between the rows of suture, in length two-thirds of the diameter of the button to be used. The intestinal half of the button is inserted through this, the running thread tied, and the shank of the button held with forceps.

In the wall of the gall-bladder a similar incision is made, and the other part of the button similarly introduced and secured in it.

The two parts of the button are then grasped with the fingers and pressed together. A sufficient degree of pressure must be used to bring the serous surfaces of the gall-bladder and intestine firmly in contact and compress the tissues. Necrosis of the tissues embraced within the cup ensues, leaving an opening as large as the button, and the button drops into the bowel and escapes *per anum*.

The author has gathered reports of seventeen cases in which this operation has been done for gall-stones, eight of which have been done by himself. In all of these cases the result has been a complete restoration of health, and no recurrence of symptoms. The period of convalescence was in all cases very short, and the patients were not seriously sick immediately after the operation. In one case done to relieve obstruction from carcinoma of pancreas, in which the anastomosis was made with a loop of small intestine, a fatal result followed, due to twisting of the bowel.

This operation is indicated: (1) In all cases where it is desirable to drain the gall-bladder for accumulations therein; (2) in all cases of perforation of the ductus choledochus, where the duct must be obliterated by the reparative process; (3) in all cases of cholelithiasis where obstruction of duct is present, or where the reflex disturbances of digestion are marked; (4) in all cases of cholecystitis, either with or without gall-stones; (5) in all profusely-discharging biliary fistulæ.

The operation is contraindicated: (1) In all cases where the gall-bladder is too small for the insertion of the button; (2) where the adhesions are so extensive that the bowel cannot be brought into contact with gall-bladder without kinking; (3) where the ductus cysticus is obliterated, cholecystectomy being indicated in such cases; (4) where the gall-bladder is enormously enlarged, with an elongation of the cystic duct, and without obstruction of the common duct. In such cases cholecystectomy should be done.—*Medical Record*, January 13, 1894.

VII. Ileo-Colostomy for Cancer of Cæcum. By Dr. A. Boiffin (Nantes). In the case of a woman, fifty years of age, who for eighteen months had been gradually developing symptoms of malignant disease in the right iliac fossa, which were becoming increasingly threatening of complete obstruction, the reporter opened the abdomen and exposed a growth involving the whole extent of the cæcum and the ascending colon, which was irremovable. A loop of small intestine about 25 centimetres distant from the growth and the middle portion of the transverse colon were then drawn out of the wound and an anastomosis effected between them as follows: a segment of each gut was first shut off by a circlet of small rubber tubing; the two loops were then brought together, a first line of sero-serous sutures, about 6 centimetres (two and a half inches) long, was applied, an incision, 4 centimetres long, was then made into each intestine, and the mucous edges were carefully sutured together, the posterior lips being united first and then the anterior; the anastomosis was then completed by an anterior sero-serous line of sutures, after which the two ends were carefully strengthened. After thorough irrigation of the parts by boiled water the parts were replaced in the abdomen, the omentum drawn down over them, and the wound closed. The operation lasted one hour and a half. The after-course was without untoward complication: on the sixth day the bowels were allowed to move. The general condition rapidly improved. At the end of seven months, when the report was made, there had been no further obstructive symptoms, but the cachexia had decidedly increased.

The author remarks that enterectomy for cancer is difficult, itself determines quite a great mortality, and does not give a certainty of radical cure. It is indicated in cases of tumors which are small, susceptible of isolation, and unaccompanied by distant glandular infection.—*Revue de Chirurgie*, November, 1893, p. 928.

VIII. Resection of Cæcum for Sarcoma; Recovery. By Dr. TH. AUGER (Paris). September 10, 1893, the author operated upon a woman, forty-six years of age, for the removal of a movable tumor in the right iliac fossa, which he had diagnosticated as a malignant growth in the cæcum. After the skin was incised it was found that the deeper layers of the abdominal wall were involved. The involved region was freely excised, opening thus widely the peritoneal cavity. The small intestine was then clamped some six centimetres above the tumor; a second clamp was placed upon the ascending colon; and a third upon the mesentery. The peritoneum having been protected by sponges, the tumor was excised together with some small glands from the meso-colon. Notwithstanding the difference in the calibre of the cut ends of the small and large intestine, they were sewed together end to end, the mucous and serous layers being united by separate rows of sutures. The sutures in the serosa were inserted at a distance of a centimetre from the cut surface. The apposition of the two portions of intestine could not be very exact, and to provide against oozing of fæcal matter between them a wisp of iodoform gauze was placed to the bottom of the wound. The operation lasted two hours and a quarter. Shock was profound, demanding several injections of saline solution to overcome it. A slow improvement was secured; on the fifth day the gauze-drain was removed, and a drainage-tube substituted. On the next day a feculent discharge began to flow, and persisted for a month; ultimately it entirely ceased, and a complete recovery of the patient was secured. The reporter remarks that in another case he would not resort to end-to-end suture, but would implant the small intestine laterally into the large intestine.—*Bull. et Mém. de la Soc. de Chirg. de Paris*, 1893, t. xix, p. 636.

IX. Recto-rectal Anastomosis by the Aid of Murphy's Button. By H. O. Marcy, M.D. (Boston). The author, in a case in which he had extirpated a high-lying carcinoma of the rectum, the lower division of the rectum having been made at a point two inches above the anus, and the upper one four inches above, brought the cut ends together, and secured them in apposition by means of the larger size of the buttons devised by Dr. Murphy, of Chicago. Owing to the thickness of the rectal wall, he also reinforced the junction with a continuous suture. The peritoneal opening, which had been free, was sutured, and the greater part of the external wound—a "Kraske" operation having been done—was closed; an iodoform drain being inserted at the lower angle. The convalescence was rapid and uneventful; the button was removed on the twelfth day, with some difficulty, not having become entirely free from its attachment, but its removal was hastened because the pressure of the button upon the neck of the bladder caused discomfort and some difficulty in urination. The button had been anchored externally by a strong silk ligature extending through the sphincter. The only ill effect noticed from the necessarily free opening of the sacral canal has been a marked hyperæsthesia of the cutaneous surfaces for a considerable distance above and upon both sides of the wound.

It will be interesting to note the subsequent history of the patient as to cicatricial contraction of the opening sufficient to interfere with the patency of the bowel.

The success of this operation was due in large measure to a preliminary colostomy which had been done some weeks previous to the rectal extirpation.—*Boston Medical Journal*, December, 1893.

X. Hernia of the Umbilical Cord. By Dr. LINDFORS. Lindfors collected thirty-one cases, seven of which were treated on the expectant plan, with four (59 per cent.) deaths. Twenty-four cases were operated, with four (16 per cent.) deaths. The operation, therefore, offers the best prognosis. It consists in excising the sac, freshening the edges of the ring, and then suturing.—*Schmidt's Jahrbücher*, September 15, 1893.

XI. Successful Operations for Congenital Umbilical Hernia soon after Birth. Dr. P. BERGER (Paris) reports two cases. The first case was in a female infant, twenty-eight hours old. The umbilical region was occupied by a tumor the size of a small hen's egg, a portion of which was irreducible. Chloroform was given and an incision was made in the linea alba. The hernia consisted of the small intestine; the cæcum and transverse colon were adherent. These were returned within the abdomen, and the incision closed by three layers of sutures. The first series were of catgut, and united the edges of the peritoneum and aponeurosis; the second series united the edges of the muscles; the third series were of silkworm-gut, and united the edges of the skin. No drainage was used. Union by first intention.

The second case was in a female infant, three days old. The umbilical tumor was the size of a large walnut, and irreducible. Chloroform was given. Incision as in first case. Contents small intestine, with cæcum adherent. Reduced, and incision closed as above. Union by first intention. Cure.

The author's paper is very instructive and contains a complete list of all reported cases,—seventy-seven in number.—*Revue de Chirurgie*, October, 1893.

XII. Recent Contributions to the Literature of Retroperitoneal Herniæ. Dr. MAUSKI, in an elaborate anatomical paper, calls attention to the fact that while so much is known about the external forms of hernia, still, the study of the internal forms has been much neglected.

Treitz was the first to accurately describe these cases which have since borne his name. He reported eight cases between 1847 and 1854. To conform to his definition, the sac must be formed of peritoneum and be buried in true retroperitoneal connective tissue. This hernia may occur where the peritoneum forms a groove or furrow. The most frequent and important locality is the fossa duodeno-jejunalis, which is situated in the left hypochondriac region, posterior to the point where the duodenum enters the jejunum. It is bounded above by the pancreas, on the left by the kidney, and on the right by the aorta. There have been sixty-six cases of this variety reported.

The second most frequent locality is in the region of the cæcum. Here there may be a variety of abnormal grooves; twelve cases of this variety are reported.

The third, the fossa intersigmoidea, is in the left iliac region; the hernia occurs between the layers of the meso-colon of the sigmoid flexure. This is the rarest form and only three cases are reported.

The symptoms of these internal forms of hernia are very rarely recognized, and only one case (Studenmayer's) has been diagnosed during life.—*Münchner medicinische Wochenschrift*, June 6, 1893.

Mr. CLARKE reports a case of operation for acute intestinal obstruction, in which the whole of the small intestine was found to be contained in a sac which consisted of a double layer of peritoneum, probably in the fossa duodeno-jejunalis. After death, which was due to exhaustion, about two feet of the upper portion of the ileum were found to be congested. The rest appeared normal.—*British Medical Journal*, May 20, 1893.

Dr. SONNENBURG reports the case of a male, aged twenty-six years, who was attacked with symptoms of acute obstruction of the bowels, with marked pain in the left hypochondriac region. The abdomen was distended in the upper part, but seemed flatter lower down. Tympanites; no tumor felt; vomitus stained yellow, but not stercoraceous. As there was no improvement at the end of a week, an operation was performed. In the exploration among the intestines, a portion which was pulled upon suddenly became free, it came out from under the left end of the stomach and consisted of the upper portion of the jejunum. A sunken groove around the intestine indicated that the intestine had been strangulated. It was supposed that the hernial sac had been in the fossa duodeno-jejunalis. This is the first case where the diagnosis was made, the operation performed, and the patient recovered.—*Centralblatt für Chirurgie*, July 29. 1893.

JOHN B. WALKER (New York).

XIII. Mortality after Operations for Relief of Strangulated Hernia in London Hospitals. By JOHN CROFT, F.R.C.S. (London). Of 940 cases of strangulated hernia treated consecutively, up to 1884, at St. Thomas's, Guy's, and St. Bartholomew's Hospitals, London, the mortality after operation was 43 per cent. In 1891 Mr. Treves gave the mortality at the London Hospital as nearly 50 per cent. At St. Bartholomew's, during the last ten years, the mortality, according to Mr. Bowlby, has been reduced to 35.82 per cent. Mr. Croft, after quoting these statistics from others, proceeds to give his personal experience. His cases number 94; of these 50 were operated upon in the pre-antiseptic period, with a mortality of over 50 per cent.; 44 have been operated upon with antiseptic precautions; death has followed in 13 instances, or in 29½ per cent.

Of the fatal cases operated upon by him in pre-antiseptic days, 16 died of peritonitis or exhaustion from protracted sufferings and feeble old age, and 5 from erysipelas or pyæmia.

Of the fatal cases operated upon with antiseptic precautions, 9 deaths occurred from exhaustion from protracted sufferings, 5 being nearly moribund when operated upon. None died of peritonitis.

Among the 94 cases of strangulated hernia there were 10 cases in which he thought it necessary to make an artificial anus. In each instance the bowel was gangrenous.

A very large proportion—viz., 7—of these occurred in the pre-antiseptic period. In each of these the bowel was in a state of gangrene more or less advanced.

He feels sure that in 4 of these the operation of primary resection and suture could not have been borne, owing to the already exhausted condition of the patients; one died an hour after operation, another two hours after, another twelve hours after, and another survived six days. This last was a woman of eighty years of age, who had been suffering already for nearly a fortnight.

The 3 others in this group of 7 were less unfavorable cases, and he thinks that two of them might have borne the operation for primary resection and suture, but that is as much as he could have ventured to predict.

Among the 44 cases operated on in the antiseptic period, there were only 3 instances of artificial anus. Not one of these could have borne the prolonged operation of primary resection and suture. The youngest, who had diseased kidneys, sank in eighteen hours after operation, and the other two, who were aged women, succumbed each in a few hours.—*American Journal of the Medical Sciences*, April, 1894.